



Cost of Clinical Trials

> 2,000,000 participants/year
 average cost - \$7931/person
 > \$15 Billion per year



Case in Point

Experimenting with a system similar to ID-Cap, Novartis documented medication adherence improvement from 30% to 80% in six months.

- as reported in *Financial Times*, Sept. 21, 2009

The Opportunity

eTect has developed an innovative solution to collecting vital clinical trial information sought by the healthcare industry for many years: **adherence**.

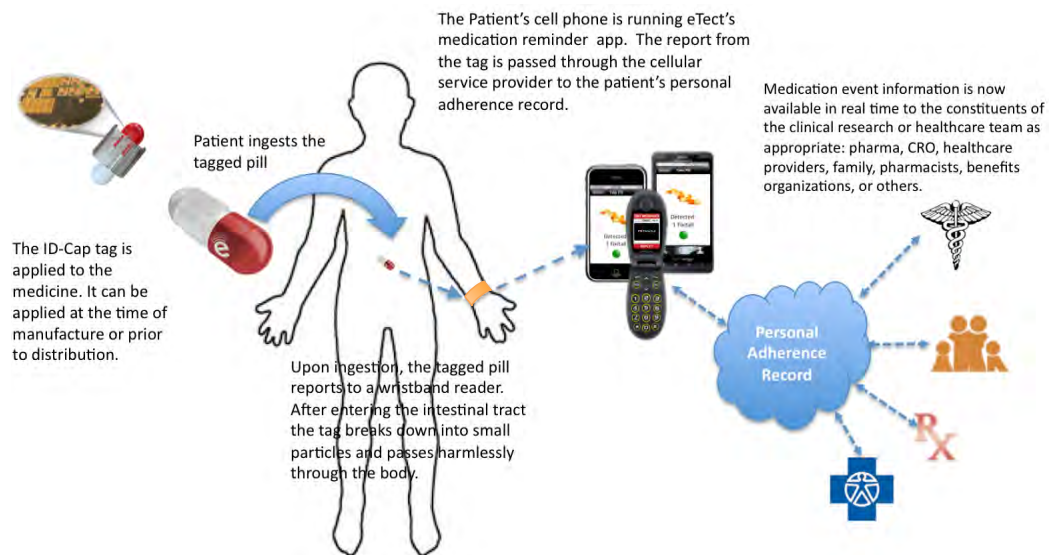
Billions of dollars are spent each year developing new drugs. Reports from the Tufts Center for the Study of Drug Development place the average cost to develop a single new drug at \$802 million, of which the clinical trial phase may consume up to half. Clinical trials are the fundamental evaluation of safety and efficacy of a new drug. The average cost per participant in a clinical trial in 2008 was \$7931. Estimates derived from clinicaltrials.gov and other sources indicate more than 2 million people participated in clinical drug trials in 2009.

How many participants in clinical trials took their medicine as prescribed? *No one knows.*

In addition to clinical trials, poor medication adherence has a significant negative impact on healthcare costs. The New England Journal of Medicine finds that, "of all medication-related hospital admissions in the United States, 33 to 69 percent are due to poor medication adherence, with a resultant cost of approximately \$100 billion a year."

eTect Solution

eTect is a development stage company creating ID-Cap, an innovative solution that uses novel wireless and materials technology and the mobile internet infrastructure to provide real-time verification of medication adherence. The patented ID-Cap system consists of three major elements: 1) biocompatible transponder tags affixed to the medication; 2) a reader worn by the patient, and; 3) a user interface application residing on a mobile phone.



Core Technologies

Along with the Company's Medication Compliance System patent, two patent-pending innovations developed with the University of Florida make ID-Cap possible: a novel in-body communications methodology and a first-of-its-kind ingestible conductive ink.

eBurst™ is a novel communications and energy harvesting technology implemented in an ultra-low power mixed-signal integrated circuit. eBurst enables two way communications with devices deep inside the GI tract **without** an on-board power source. As a result an ID-Cap tag has a truly flat profile to virtually eliminate any impact on the form factor of pills, capsules, or implants.

The second innovation is a flexible, biocompatible substrate and nanoparticle - based conductive ink. These innovative materials enable **ingestible** and flexible antennas and interconnections such that the resulting ID-Cap tag may be applied to the inside or outside of a finished capsule or on a finished pill, minimizing any effect on the pharmaceutical formulation, manufacturing process, or stability of the compound.

Improved Adherence – Improved Outcomes

As stated by former Surgeon General C. Everett Koop, "Drugs don't work in patients who don't take them." A fundamental requirement of improving adherence is being able to measure it. ID-Cap enables definitive measurement of medication adherence. In clinical trials, adherence data improves the quality of information on safety and efficacy of new drugs. Multiple studies have shown that improved adherence can lead to more effective, less expensive clinical trials.

eTect will enable the trial sponsor and/or administrator to deploy ID-Cap, collect adherence data and place it in an adherence information database. The Company intends to offer a turnkey adherence information service where eTect will contract with the trial sponsor or administrator to provide real-time adherence information. The Company also intends to offer technology and components such as ID-Cap tags and readers for sale to trial sponsors and administrators to integrate the technology into their own clinical studies.

"I love the idea. My division is sponsoring many trials for addiction and HIV where we need to follow how adherent people are to the protocol. Current technologies do not tell us if the patients actually took their pills. This technology would be very, very important for clinical trials."

- Dr. Jag H. Khalsa, Ph.D., National Institute on Drug Abuse, National Institutes of Health

Current Status

The Company has completed development of and conducted live human demonstrations with a proof of concept ingestible pill. This pill, made from off-the-shelf components and encapsulated in epoxy, demonstrates and validates the ID-Cap in vivo communications and gastrointestinal (GI) sensor.



The eTect engineering team has achieved a number of important milestones in the development of the microchip, the GI sensor, and the ID-Cap tag including manufacturing, application to the target medication, and analyses of stability, dissolution properties, and biocompatibility. The Company has also determined what it believes to be a clear regulatory pathway for use of ID-Cap in clinical trials of new drugs.

Intellectual Property

The Company has received notice of allowance of a significant portion of the claims in patent application (11/458,815) for a Medication Compliance System and we continue to file additional applications to improve our intellectual property portfolio. The Company has executed exclusive option agreements with the University of Florida (UF) for the eBurst *in vivo* communication method patent application and the biocompatible nanoparticle ink patent application and is currently negotiating terms with UF for exclusive rights to these patent applications.

Contact Information

Eric Buffkin, President
eric@etectbio.com
+1.352.262.8947 cell
+1.352.367.8328 x102 office

Neil Euliano, CEO
neil@etectbio.com
+1.352.514.7459 cell
+1.352.367.8328 x107 office

eTect llc
4817 SW 34th St, Suite 4
Gainesville, FL 32608
www.etectbio.com